

**REMARKS**

Claims 1-18, 20-27 and 29-42 are pending in the present application. Claims 17, 18, 20-27 and 29-33 are rejected. Claims 17 and 21 are herein amended.

**Applicants' Response the Advisory Action dated January 22, 2007**

The Advisory Action indicates that the amendments filed on December 22, 2006 were entered, but not considered persuasive. In the attached comments, the Examiner explains that "hydrophilic" is broadly described in the specification, and no lower limit of solubility is defined. Accordingly, it is the position of the Advisory Action that if any part of the cross-linking agent has any slight hydrophilicity, Corn would anticipate the claims. The Advisory Action identifies the thio group at the end of the cross-linking agent as providing a minimal level of water solubility.

Additionally, it is the position of the Advisory Action that due to the recitation of "by use of," a hydrophilic group which is present in an intermediate stage, but not present in the final cross-linking agent would anticipate the claims. The Advisory Action points to the amino group and thio groups in the MUAM as an example. See Figure 4.

Accordingly, Applicants here amend the claims to more specifically recite that it is the repeating polymer R which is hydrophilic. In view of this amendment, Applicants note that Corn and Bambad provide conflicting teachings, with Corn disclosing a hydrophobic repeating polymer and Bambad disclosing a hydrophilic repeating polymer. Additionally, Applicants herein amend claims 17 and 21 in order to clarify the subject matter of the claims, which had

Amendment under 37 CFR 1.114  
Serial No. 10/756,767  
Attorney Docket No. 032084

been improperly translated. This amendment is supported by, for example, paragraphs [0077], [0082] and [0086]. No new matter has been added.

Applicants also note that the Advisory Action refers to an alternate embodiment of Corn for the first time. In this alternate embodiment, thiolated DNA is linked via SSMCC to an 11-mercaptoundecanoic acid/poly-L-lysine (MUA/PL) linker. See column 9, lines 19-22.

Applicants respectfully submit that such an embodiment does not disclose or suggest the invention as claimed. This hypothetical linker differs from the claimed invention in several ways. First, the poly-L-lysine linker of Corn is a homo-linker, while the claims require a hetero-linker. Second, the poly-L-lysine linker of Corn is bonded to the surface using electrostatic interactions. On the other hand, the linker of the present invention is covalently bonded to a functional group on the surface of the solid surface or a functional group introduced to the surface of the solid surface. Finally, the MUA/PL linker of Corn has electrostatic interactions inside, but the claimed linker does not. These differences are illustrated in the attached Figure F. Accordingly, contrary to the assertions in the Advisory Action, Applicants respectfully submit that the cited references do not disclose or suggest the invention as claimed. Applicants respectfully submit that the present claims are patentable over the cited references for at least the reasons presented in the Amendment dated December 22, 2006, and the reasons herein. Favorable reconsideration is respectfully requested.

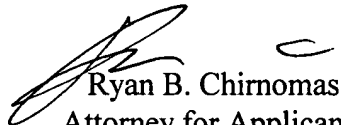
For at least the foregoing reasons, the claimed invention distinguishes over the cited art and defines patentable subject matter. Favorable reconsideration is earnestly solicited.

Amendment under 37 CFR 1.114  
Serial No. 10/756,767  
Attorney Docket No. 032084

Should the Examiner deem that any further action by applicants would be desirable to place the application in condition for allowance, the Examiner is encouraged to telephone applicants' undersigned attorney.

If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,  
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Enclosures: Explanatory Figure F